

**WATER ALLOCATION
PROGRAM DEVELOPMENT
Meeting Proceedings**

**Thursday, October 23, 2003
9:00AM-11:00AM**

1. WELCOME

Ms. Kathleen Crawley welcomed participants to today's meeting and thanked them for their continued dedication to the process. She stated that the meeting would consist of a presentation by the Water Use Reporting Committee, an analysis of the emerging recommendations from Ms. Connie McGreavey, comments from Mr. Peter Marino regarding joint advocacy and group discussion, time permitting. She quickly summarized the process of moving forward, and reviewed the format and distributed materials for today's session. She introduced the new Supervising Planner for the Water Resources Board (WRB) Ms. Beverly O'Keefe. She introduced Ms. Anne Veeger, Professor, URI Geosciences and Chair of the Water Use Reporting Committee

2. PRESENTATION: WATER USE REPORTING COMMITTEE

Ms. Veeger introduced the two committee members that would assist with the presentation, Ms. Emily Wild, Hydrologist, USGS and Mr. Joe McLoughlin, Project Manager, ESS Group. She reviewed the committee mission, and noted that the current committee membership is the result of a merger from what were initially two committees. The State Guide Plan recognizes the need for a statewide water and wastewater information system, uniform data collection, and a statewide monitoring system. This helped to guide the work of the committee. Key information points include who is using what, when and from where. She stated that by statute the Water Resources Board is charged with conducting an inventory of the water resources of the state. The question remains whether the existing inventory data is adequate or is there a need to establish a specific system to satisfy the statutory requirement. Adequate data is necessary for water supply and wastewater treatment facilities planning, drought management consistent with the drought program, tracking and evaluation of out of basin transfers, evaluation of environmental impacts of proposed new withdrawals on water resources, and to ensure meaningful application of hydrogeologic models to optimize water management.

Research: An Evaluation of Efforts in Other States

Mr. McLoughlin stated that the committee reviewed programs in other states. They reviewed thresholds, how other states address private wells, exemptions, grandfathering provisions, differences in requirements for surface water and groundwater and location requirements. He reviewed sources of data noting that

there was a wide variety of information collected for varying reasons. There were, however, some common themes. For example, most states apply the same rules for surface and groundwater. Some states use geographical boundaries. Thresholds ranged from under ten thousand gallons per day (gpd) to 250,000 gpd with Hawaii the lowest at 1,000 gpd. The committee focused on the New England states. Of the sixteen Eastern states reviewed, roughly half used thresholds under 20,000 gpd and half used thresholds over 20,000 gpd. Most states required reporting based on annual average use, with a stipulation to capture comparable seasonal use, typically over a three-month period. Massachusetts, for example has a 100,000 gpd annual average and they have a three-month 9 million gallon usage threshold. He summarized the data requirements of the various states noting that the major conclusion from the research is that high quality data that is consistent with what is needed to operate the program is essential.

Data Gaps: A Review of Actual and Estimated Data

Ms. Wild reviewed the various sources of water data. The committee studied two major categories of user groups in an effort to identify data gaps. The two groups - public supply withdrawals and self-supplied withdrawals were then subcategorized into major and minor withdrawals, and further divided into domestic, industrial and commercial use. Review of categories included:

- a. Major Public Suppliers -Major public supplies are self-metered and report through the water System Supply Management Plans. The main issue in this category is the varying frequency of reporting- monthly, quarterly or annually.
- b. Minor Public withdrawals- USGS currently uses the domestic water use coefficient of 67 gpd per person from the 1990 census. These estimations were considered sufficient for the small suppliers and for the self-supplied domestic users.
- c. Self Supplied Domestic - seasonal use coefficients may need to be considered in some areas along the coast where the population changes and in the summer when water use increases.
- d. Self-supplied industrial and commercial- Water use is currently estimated using the Standard Industrial Classification (SIC) (water) coefficients. The estimated data is considered sufficient.
- e. Self-supplied agricultural –The category includes crop irrigation, golf course irrigation and livestock.

The national coefficients produce uneven results when compared to metered data. However, the Rhode Island coefficient currently being developed/studied improves the estimations. These estimations are thought to be sufficient for withdrawals. Seasonal use needs to be considered whether using estimation or metering. She stated that one member of the committee felt that current water use estimation techniques are adequate. She mentioned the 2000 “compilation” data that is provisional and due to be released to the public in January. In general, public supply withdrawals represent the largest share the water use. However, self supplied users,

though small in terms of overall water use, are concentrated in certain basins. In addition, since the data is estimated seasonal variations are not reflected.

Committee Findings and Recommendations

Ms. Veeger reviewed the committee's findings and recommendations for each of the two major categories:

Major Public Suppliers- She defined this category in Rhode Island as those suppliers that transport more than 50 million gallons per year and are required to submit a Water System Supply Management Plan (WSSMP) to the Water Resources Board. This category captures over 84% of total withdrawals for the state as a whole.

She noted that there are some data gaps even within the WSSMP. First, there is the question of deliveries versus withdrawals. The term "withdrawal" refers to how much water is pulled out of the source whether a well or surface water body. Many water supply companies are reporting deliveries based on the billing rather than withdrawals. There can be significant differences, sometimes 20% or 30%, between the amount withdrawn and the amount delivered. Secondly, there is a need to identify both how much water is withdrawn from the resource and then what is happening to it. Third, uniformity of the reporting period is dependent upon the type of metering and how often the company collects the data from the meters. She acknowledged that the infrastructure in place to get the additional data. The committee recognizes that there are logistics associated with uniform reporting that will require time. Many major suppliers are converting to meters with telemetry but this is not in place now though over time it would be desirable to move in that direction. Monthly withdrawal data is available now as is the ability to report by water use category. This is more of an accounting issue which can improve as companies upgrade their software. She summarized the recommendations for the major public suppliers:

- Report annually on a calendar year basis
- Provide monthly data including production by source, and break out sales to and from other suppliers
- Provide quarterly water use data by category with the annual report consistent with the New England Water Use Data System (NEWUDS) and the WSSMP.

The committee felt that 2010 was a reasonable goal that would not excessively burden the suppliers.

Self Supply- Ms. Veeger reported that the committee compared the relationship between metered data to coefficient-derived data. For domestic use, there is a good correlation. There is potential for significant errors for the other use categories as the figures are primarily national average coefficients. In addition, there have been significant changes in the technology in the commercial and industrial sectors resulting in increased accuracy. For example, in the agricultural sub-category, a turf farm reduced its water use by 40% by changing the configuration of the sprinkler heads on the irrigation system. The committee felt that using the coefficients resulted in an unacceptable level of inaccuracy in terms of assessing how much water

is currently being used in the basin. The impact of the errors would be greatest in those areas that have the largest amount of self-supply.

Geographically there are large portions of the state that are not served by major public suppliers. For this category the committee recommended voluntary reporting of metered data or other accurate method of measurement accepted by the Water Resources Board beginning January 2005 with mandatory reporting to be implemented by January 2007.

Ms. Veeger reported that the committee conducted extensive research to determine an appropriate water-use threshold for RI including a review across states that included a review on the size of basins and flow of rivers. She noted that Rhode Island has small watersheds. A threshold that is too large would result in missing water use that is significant at the basin level in RI. Currently water suppliers are required to break out “major users”, those that use 3 million gallons per year or more. The committee felt that using the same threshold for self supplied users as major users on public supply made sense. The 3 million gallons per year is an annualized average that would equate to 8,200 gpd or 740,000 gallons or more over any consecutive three-month period. Using this recommended threshold, the committee estimated that 250 to 300 users would be required to report.

Ms. Veeger summarized the proposed system by stating that there would be three categories of users. The first would be the major users subject to the Water System Supply Planning (WSSMP) regulations (Public suppliers delivering more than 50 million gallons per year). The second category would include the ‘major self-supply users’ - those that use more than 3 million gallons per year on an annual basis. The final category would be “minor self supply users” - those below the recommended water use threshold. Major public suppliers would report metered data through the WSSMP while major self supplied users would report metered data or other data as acceptable to the Water Resources Board. Minor self supply users would not be required to report and use would continue to be estimated using water use coefficients.

She listed further areas to explore and the information efforts that would be required to initiate a reporting program, including identifying those users that would most likely be required to report. The committee felt that incentives for reporting were worth considering. The committee discussed fees but given the likely size of the program did not feel a fee would be useful. Funding to support the program remains a question.

Discussion

There was a question regarding how commercial and industrial water use was separated out from public water supply. Ms. Wild stated that that this area represents one of the biggest gaps because there are commercial and industrial users that are on public supplies but also have private wells.

In response to a question about the difference between water withdrawn and water delivery, Ms. Veeger stated that the required reporting on withdrawals and

deliveries would resolve this issue and the discrepancies that result from current data. It was noted that centralized water use data was needed and that the list of sources of data represent very different kinds of data. The committee is proposing that the water supply, withdrawal and use data be centralized at the Water Resources Board. There was a question about private well data. Ms. Veeger stated that it was recommended that private well owners not be required to report use. This recommendation does not address the need to establish a database that identifies private well location that is beyond the purview of the committee.

A question objected to the committee recommendation to meter agricultural users on the basis of impracticality. The speaker noted that Massachusetts determined that the additional accuracy from metering versus log data was not worth the additional money required to install and maintain meters. Ms. Veeger responded that the committee had discussed this issue and proposed reporting, not necessarily metering be used to provide accurate and uniform data acceptable to the Water Resources Board.

There was discussion about funding, incentives and the need to quantify both the cost to the Water Resources Board and the user. The committee estimated the number of users to assess how large the program would be using RI Economic Development Corporation data and applying water use coefficients. The number of users required to report will likely be smaller than the first 'pass' finding of "300" once the parameters are established.

There was a question about whether the reported data could be evaluated by basin. Ms. Veeger stated that the public suppliers would be required to document production by source and purchases to and from other suppliers. The hope was that this would allow basin specific analysis as water purchases and discharges can complicate analysis quickly. For example, attempts to track by basin can become complicated when there are "self-supplied, publicly disposed users" as well as "publicly supplied self-disposed users." The reporting form could also track source of supply and method of disposal for the 'minor' suppliers. It was noted that the reported data, along with the basin study data, including wastewater, would be part of the central database (New England Water Use Data System).

Mr. Bettencourt stated that he had made a recommendation that the amount of water set-aside for farmers be based on the fact that farmers generally need one inch of water per acre per week or roughly 32,000 gallons. He stated that the committee felt that rainfall should be subtracted from this figure, and a method for estimating water use was further developed. He felt that the estimated amount of water should be set aside for the farmers and that if they require more they would have the option of reporting their use. He does not feel that it is a good use of taxpayers money to require the farmers to report water use when the other methodologies are available. He felt the money would be better spent on efforts to reduce water use, similar to the example Ms. Veeger used of the turf farm that reduced water consumption by 40% by changing the sprinkler heads. Other farmers could save water by converting from sprinkler systems to drip irrigation. A better use of the state's resources would be to give incentives to farmers to conserve water.

3. DISCUSSION OF PRELIMINARY COMMITTEE RECOMMENDATIONS

Ms. Crawley thanked the Water Use Committee and attendees for the presentation and discussion. She stated that the next portion of the agenda would include a presentation of the recommendations, emerging themes and priorities, and their relation to other plans and priorities. Ms. Connie McGreavy directed attention to materials that were distributed (the presentation, a spreadsheet, thematic summary and the executive summary of the Arthur D Little Study (ADL). She emphasized that the process is moving quickly and that this is a work in progress intended to provide the group with a tool to assess and organize the recommendations as they are emerging from the process. The spreadsheet organizes the 84 recommendations into the categories using the Arthur D. Little study which became the state's water supply plan (State Guide Plan Element 722). The Water Resources Board has organized its work plan and budget around these categories. She noted that there are additional columns not shown on the sheet, but that will be filled out over time (i.e. the model water code, responsible entity/agency categories). The last two columns are blank and will require committee attention in November to assist with the further development of costs and priorities. She emphasized that the recommendations have been summarized in the spreadsheet but that committee members can be assured that the full text of the recommendations will be provided in the final wording as prepared by the committees. The spreadsheet will probably not appear again in the process, but will assist today's discussion to identify priority recommendations and timeframes.

She reviewed the four major categories of recommendations, noting that twenty-five recommendations or 30% of the total were classified as other. These recommendations did not correspond to a State Guide Plan Element policy or an ADL Study category. She noted that during this process there have been no recommendations related to supply augmentation (a fourth study category). She stated that there are some clear trends:

- In the near term, five of the nine committees felt that some aspect of **data collection and management** was needed. Five of the nine committees felt that **conservation education** was critical. Two committees felt there were steps that could be taken now related to the **water rates** structure to further the goals of water management.
- In the mid term: **Integrated water and wastewater planning**. Three committees felt that the connection between water and wastewater was important.
- Four committees felt that **technical assistance** was needed for the user, for more complicated basin management decisions, various local supply and land use management efforts.
- In the long term: Three committees felt it would be useful to have an **information clearing house** to access all information in one place.
- Three committees discussed 'permits'. Ms. McGreavy explained that the word permit is in quotations because it doesn't explicitly mean a permit. It may mean a registration system, a mandatory reporting system, a withdrawal permit, an out of basin transfer permit or a permit for a private well. These were all ideas that

came forward in the process. One way to formalize water rights and ensure predictability is through a permit system. She noted that the Water Rights Committee has offered a menu of options to be discussed in the November meeting.

She noted that there was consensus that more data is needed from suppliers, on-going monitoring, a clear understanding and methods for calculating safe yield, conservation information, outreach and training as well as public relations efforts to help various audiences understand the messages and to tailor technical assistance. She questioned whether the WRB needs a team approach for technical review of large projects to assist local decision makers? Water audits, best management practices including retrofitting appliances are some specific examples of demand management efforts mentioned in the ADL Study and in the committees. She also noted areas of state law and policy that may require change noting that local, federal and interstate issues arise as well. She encouraged the committees to define any legislative needs. In summary, the goal is to identify the critical path for implementing the recommendations and providing guidance to the joint advocacy and funding committee. During the November meeting critical elements should be identified.

4. NEXT STEPS

Ms. Crawley asked Mr. Marino to address the next agenda item and stated that the group is welcome to stay for further discussion or address any comments or questions to staff prior to the next meeting. She encouraged participants to review the Thematic Issue document that was distributed. She stated that the short term recommendations would be developed over the next two meetings working toward the strategic session in January and the development of a long term blueprint. Ms. Marks asked that temperature increases and their impact on water use be considered.

Mr. Marino stated that his role is to implement with the help of the experts. He stated there were a couple of issues discussed this morning that need to be emphasized. There are eighty four plus decisions. In reality this number is misleading. Some committees have laid out options representing choices that need to be made. It is important to make decisions on those recommendations that are the most important. It is important to separate the things “you’d like to do” from “the things you need to do”. The near term is what we are really talking about here. If we are not successful in the near term, the long term will not happen. In the near term we must identify the “must haves”- the key levers that must be put into play so that the rest of the recommendations will fall into place.

He stated that the environment we are working within has limited resources and significant budget deficits. This means that the committee is not only competing for new dollars but also for the dollars it wants to keep. Retasking existing dollars and combining resources should be considered. The statement that 92% of the recommendations need to be accomplished in the short term means that some 72 recommendations need to be done right away. This is not realistic. This group needs to identify the three to five most critical needs and get them going. If the committee had half a million dollars, what would it do and why? There is also a need to

identify who is responsible for implementing the recommendations. Lastly, it is important to understand that the Joint Advocacy Committee needs this group to pare down the recommendations within the next thirty days.

Ms. Crawley thanked the participants for attending, and offered that she and staff were available for additional questions.